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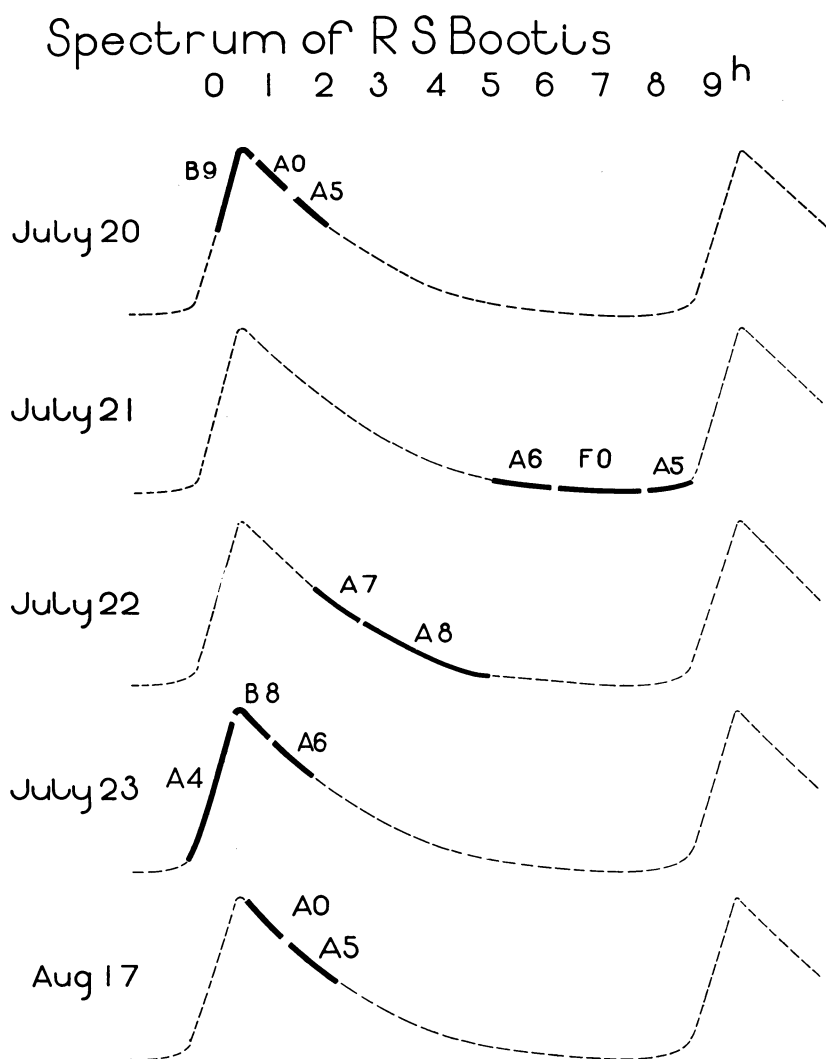
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SPECTRUM OF THE CLUSTER-TYPE VARIABLE RS BÖÖTIS.

Thirteen good spectrum plates of the cluster-type variable RS *Böötis* were obtained with the small focal plane spectrograph attached to the 60-inch reflector on July 20-23, and on August 17, 1914. The plates were taken at maximum and minimum and at several points between to determine whether the spectrum varies.

The plates are as follows:

No.	Date	Exposure, P.S.T.		Actual Exposure Time in Minutes	Type
		8 <sup>h</sup> 58 <sup>m</sup> —	9 <sup>h</sup> 34 <sup>m</sup>		
26	1914, July 20			35	Bø 9
27		9 42	10 13	30	A0
28		10 22	10 58	35	A5
35	21	8 04	9 06	60	A6
36		9 16	10 47	90	F0
37		10 54	11 40	45	A5
40	22	8 04	8 52	45	A7
41		8 58	11 12	105	A8
43	23	8 59	9 45	40	A4
44		9 49	10 25	35	B8
45		10 33	11 12	40	A6
57	Aug. 17	7 37	8 17	40	A0
58		8 24	9 19	45	A5

The position of the plates is plotted along the light curve recently obtained by SEARES and SHAPLEY. Owing to difference in quality of the plates and to the small scale, the actual variation of type from the revised values given may be from one to two tenths of a Harvard unit. At maximum the hydrogen lines H $\beta$ , H $\gamma$ , H $\delta$  and H $\epsilon$  are strong and broad, the calcium line K being almost invisible; at minimum the intensities are reversed, the hydrogen lines being fine and narrow with H and K strong. Between these there is a gradual transition from one type to the other.

Mr. ADAMS has measured the plates to determine, if possible, whether the star is a spectroscopic binary. The scale is so small, however, (H $\gamma$  to K = 2¼<sup>mm</sup>), that the results are inconclusive beyond an indication that any variation in velocity must be moderate in amount.

F. G. PEASE.

MOUNT WILSON SOLAR OBSERVATORY.